



2635

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Kornbluh, et al.

Attorney Docket No.:
SRI1P036/US-4257-2

Application No.: 10/007,705

Examiner: Unassigned

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Filed: December 6, 2001

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Group: 2635

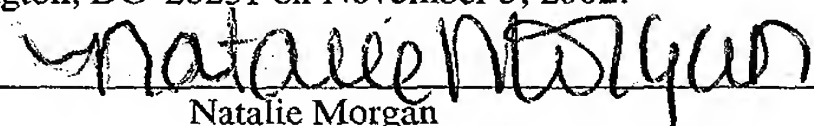
Title: ELECTROACTIVE POLYMER SENSORS

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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail to: Commissioner for Patents, Washington, DC 20231 on November 5, 2002.

Signed:


Natalie Morgan

INFORMATION DISCLOSURE STATEMENT
37 CFR §§1.56 AND 1.97(b)

Commissioner for Patents
Washington, DC 20231

Dear Sir:

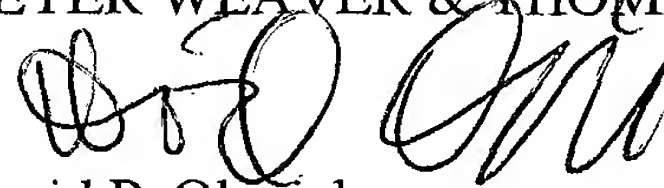
The references listed in the attached PTO Form 1449, copies of which are attached, may be material to examination of the above-identified patent application. Applicants submit these references in compliance with their duty of disclosure pursuant to 37 CFR §§1.56 and 1.97. The Examiner is requested to make these references of official record in this application.

This Information Disclosure Statement is not to be construed as a representation that a search has been made, that additional information material to the examination of this application does not exist, or that these references indeed constitute prior art.

This Information Disclosure Statement is: (i) filed within three (3) months of the filing date of the above-referenced application, (ii) believed to be filed before the mailing date of a first Office Action on the merits, or (iii) believed to be filed before the mailing of a first Office Action after the filing of a Request for Continued Examination under §1.114. Accordingly, it is believed that no fees are due in connection with the filing of this Information Disclosure Statement. However, if it is determined that any fees are due, the Commissioner is hereby authorized to charge such fees to Deposit Account 500388 (Order No. SRI1P036)

Respectfully submitted, —

BEYER WEAVER & THOMAS, LLP

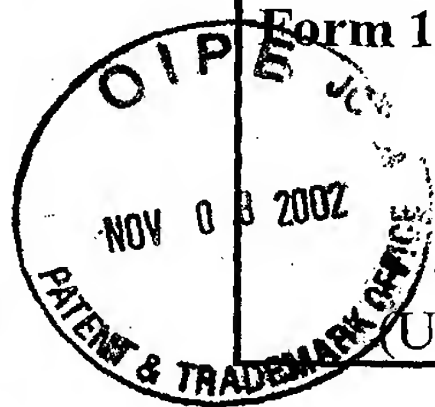


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Form 1449 (Modified) Information Disclosure Statement By Applicant (Use Several Sheets if Necessary)	Atty Docket No. SRI1P036/US-4527-2	Application No.: 10/007,705
	Applicant: Pelrine, et al.	
	Filing Date 12/06/01	Group 2635

U.S. Patent Documents

Examiner Initial	No.	Patent No.	Date	Patentee	Class	Sub-class	Filing Date
	A1	5,977,685	11/02/99	Kurita, et al.			06/03/96
	A2	6,048,622	04/11/00	Hagood IV, et al.			02/09/99
	A3	6,060,811	05/09/00	Fox, et al.			07/25/97
	A4	4,885,783	12/05/89	Whitehead, et al.			04/10/87
	A5	4,843,275	06/27/89	Radice			01/19/88
	A6	4,400,634	08/23/83	Micheron			12/09/80
	A7	5,361,240	11/01/94	Pearce			07/10/90

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Foreign Patent or Published Foreign Patent Application

Examiner Initial	No.	Document No.	Publication Date	Country or Patent Office	Class	Sub-class	Translation	
							Yes	No

Other Documents

Examiner Initial	No.	Author, Title, Date, Place (e.g. Journal) of Publication
	B1	Ajluni, Cheryl, "Pressure Sensors Strive to Stay on Top, New Silicon Micromachining Techniques and Designs Promise Higher Performance", <i>Electronic Design - Advanced Technology Series</i> , October 3, 1994, pp. 67-74
	B2	Ashley, S., "Smart Skis and Other Adaptive Structures", <i>Mechanical Engineering</i> , November 1995, pp. 77-81
Examiner		Date Considered

Examiner: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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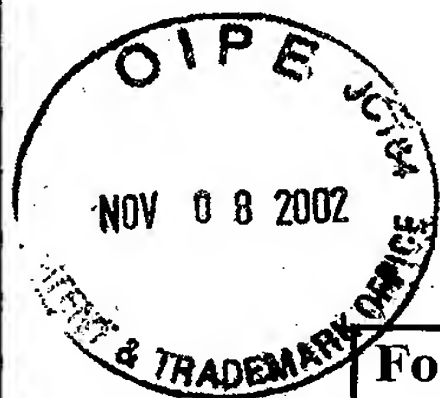
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Other Documents **Technology Center 2600**

Examiner Initial	No.	Author, Title, Date, Place (e.g. Journal) of Publication
	C1	Bar-Cohen, Yoseph, JPL, <i>WorldWide ElectroActive Polymers, EAP (Artificial Muscles) Newsletter</i> , Vol. 1, No. 1, June 1999.
	C2	Cheng, Z.-Y., H. S. Xu, J. Su, Q. M. Zhjang, P.-C. Wang, and A. G. MacDiarmid, "High performance of all-polymer electrostrictive systems," Proceedings of the SPIE International Symposium on Smart Structures and Materials: Electro-Active Polymer Actuators and Devices, March 1-2, 1999, Newport Beach, California, USA., pp. 140-148.
	C3	Kornbluh, R., Pelrine, R., Eckerl/e, J., Joseph, J., "Electrostrictive Polymer Artificial Muscle Actuators", IEEE International Conference on Robotics and Automation, Leuven, Belgium, 1998
	C4	Ktech's PVDF Sensors, http://www.ktech.com/pvdf.htm , 06/06/2001, pp. 1-5.
	C5	Pelrine, R., R. Kornbluh, and J. Joseph, FY 1998 <i>Final Report on Artificial Muscle for Small Robots</i> , ITAD-3482-FR-99-36, SRI International, Menlo Park, California, 1999
	C6	Pelrine, R., R. Kornbluh, Q. Pei, and J. Joseph, "High Speed Electrically Actuated Elastomers with Over 100% Strain," <i>Science</i> , Vol. 287, No. 5454, pages 1-21, 2000
	C7	Pelrine, R., R. Kornbluh, and G. Kofod, "High Strain Actuator Materials Based on Dielectric Elastomers," submitted to <i>Advanced Materials</i> (May 2000).
Examiner	Date Considered	

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Other Documents
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Examiner Initial	No.	Author, Title, Date, Place (e.g. Journal) of Publication
	D1	Pelrine, R., Roy Kornbluh, Jose Joseph, Qibing Pei, Seiki Chiba "Recent Progress in Artificial Muscle Micro Actuators," , SRI International, Tokyo, 1999 MIT/NEEDOIMNIC, 1999
	D2	Treloar, L.R.G, "Mechanics of Rubber Elasticity," <i>J Polymer Science, Polymer Symposium</i> , No. 48, pp. 107-123, 1974
	D3	Uchino, K. 1986. "Electrostrictive Actuators: Materials and Applications," <i>Ceramic Bulletin</i> , 65(4), pp. 647-652, 1986
	D5	Zhenyi, M., J.I. Scheinbeim, J.W. Lee, and B.A. Newman. 1994. "High Field Electrostrictive Response of Polymers," <i>Journal of Polymer Sciences, Part B-Polymer Physics</i> , Vol.32, pp. 2721-2731, 1994
	D6	http://www.ph.unimelb.edu.au "The Rubbery Ruler", printed from web 7/25/01.
	D7	Joseph, Jose, Ron Pelrine, Joe Eckerle, John Bashkin, and Prasanna Mulgaonkar, "Micro Electrochemical Composite Sensor, SRI International, printed from web 7/25/01.
	D8	Pei, Qibing, Ron Pelrine, Roy Kornbluh, Sigridur Jonadottir, Venkat Shastri, Robert J. Full, "Multifunctional Electroelastomers: Electroactive Polymers Combining Structural, Actuating, and Sensing Functions" University of California at Berkeley, Berkeley, CA., available at www.sri.com-publications , January 17, 2001
	D9	http:// www.neurosupsplies.com/pdf_files/transducers.pdf , printed from web 7/25/01.
	D10	PowerLab ADInstruments, "MLT001 High-Sensitivity Force Transducers, AD Instruments Tranducers Series, printed from web 7/25/01.
	D11	Julian W. Gardner, "Microsensors: Principles and Applications," John Wiley, 1994
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